IN THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) A method of fabricating a thin-film battery, comprising:

providing a substrate;

forming an electrode first film on the substrate;

forming an electrolyte second film electrolyte on the first film, wherein the electrolyte second film blocks the flow of electrons while permitting the flow of ions, and wherein forming the electrolyte second film includes:

depositing electrolyte material using a deposition source; and

supplying energized particles from a second source such that the particles provide energy to the electrolyte material to deposit the electrolyte material into a desired film structure; and

forming an electrode third film on the second film,

wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness of less than 5000 Angstroms.

2. (Original) The method of claim 1, wherein supplying energized particles includes supplying ions having an energy of greater than about 5 eV.

3. (Original) The method of claim 1, wherein supplying energized particles includes supplying ions having an energy of less than about 3000 eV.

4. (Original) The method of claim 1, wherein supplying energized particles includes supplying ions having an energy in the range of about 5 eV to about 500 eV.

5. (Original) The method of claim 1, wherein supplying energized particles includes supplying ions having an energy in the range of about 5 eV to about 250 eV.

6. (Cancelled)

7. (Original) The method of claim 1, wherein supplying energized particles includes supplying ions having an energy in the range of about 0 eV to about 40 eV.

8. (Cancelled)

9. (Original) The method of claim 1, wherein forming the electrolyte second film includes forming the electrolyte film to a thickness of less than about 2500 Angstroms.

10 - 12. (Cancelled)

13. (Previously presented) The method of claim 71, wherein forming the electrolyte second film includes forming the electrolyte film to a thickness of less than about 100 Angstroms.

14. (Previously presented) The method of claim 71, wherein forming the electrolyte second film includes forming the electrolyte film to a thickness in a range of about 10 Angstroms to about 200 Angstroms.

15. (Previously presented) The method of claim 71, wherein forming the electrolyte second film includes forming the electrolyte film to a thickness in a range of about 10 Angstroms to about 100 Angstroms.

16. (Previously presented) The method of claim 1, wherein depositing electrolyte material includes depositing Li_3PO_4 electrolyte material.

17. (Previously presented) The method of claim 16, wherein supplying energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the Li_3PO_4 electrolyte material.

18. (Previously presented) The method of claim 16, wherein forming the electrolyte second film includes providing a nitrogen-enriched atmosphere in which the Li_3PO_4 electrolyte material is deposited.

19. (Original) The method of claim 1, wherein forming the electrolyte film includes forming the electrolyte film to a thickness sufficient to insulate the electrode first film from the electrode second film and to allow ion transport between the electrode first film and the electrode second film.

20. (Original) The method of claim 19, wherein forming the electrode first film includes depositing at least one of a metal and an intercalation material.

21. (Original) The method of claim 20, wherein forming the electrode third film includes depositing at least one of a metal and an intercalation material.

22. (Original) The method of claim 1, wherein forming the electrolyte second film includes forming the electrolyte film to a thickness in a range of about 1 nanometer to about 250 nanometers.

23 - 36. (Cancelled)

37. (Currently amended) An apparatus comprising:

means for providing a substrate;

means for forming an electrode first film on the substrate;

means for forming an electrolyte second film on the first film, wherein the electrolyte second film blocks the flow of electrons while permitting the flow of ions, and wherein the means for forming the electrolyte second film includes:

means for depositing electrolyte material using a deposition source; and

means for supplying energized particles from a second source such that the particles provide energy to the electrolyte material to deposit the electrolyte material into a desired film structure; and

means for forming an electrode third film on the second film,

wherein the electrolyte second film is deposited to a thickness of less than about 5000 Angstroms.

38. (Previously presented) A method of fabricating a thin-film battery, comprising:

providing a substrate;

forming an electrode first film on the substrate;

forming an electrolyte second film electrolyte on the first film, wherein the electrolyte second film blocks the flow of electrons while permitting the flow of ions, and wherein forming the electrolyte second film includes:

depositing electrolyte material using a deposition source; and

supplying energized particles from a second source such that the particles provide energy to the electrolyte material to deposit the electrolyte material into a desired film structure; and

forming an electrode third film on the second film,

wherein the supplying energized particles includes supplying ions having an energy in the range of about 5 eV to about 50 eV, and

wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness of less than 2000 Angstroms.

39. (Previously presented) The method of claim 38, wherein the supplying energized particles includes supplying ions having an energy in the range of about 5 eV to about 40 eV.

40. (Previously presented) The method of claim 38, wherein the supplying energized particles includes supplying ions having an energy in the range of about 5 eV to about 30 eV.

41. (Previously presented) The method of claim 38, wherein the supplying energized particles includes supplying ions having an energy in the range of about 5 eV to about 20 eV.

42. (Previously presented) The method of claim 1, wherein the supplying energized particles includes supplying ions having an energy in the range of about 10 eV to about 500 eV.

43. (Previously presented) The method of claim 1, wherein the supplying energized particles includes supplying ions having an energy in the range of about 10 eV to about 400 eV.

44. (Previously presented) The method of claim 1, wherein the supplying energized particles includes supplying ions having an energy in the range of about 10 eV to about 300 eV.

45. (Previously presented) The method of claim 1, wherein the supplying energized particles includes supplying ions having an energy in the range of about 10 eV to about 250 eV.

46. (Previously presented) The method of claim 1, wherein the supplying energized particles includes supplying ions having an energy in the range of about 10 eV to about 200 eV.

47. (Previously presented) The method of claim 1, wherein the supplying energized particles includes supplying ions having an energy in the range of about 10 eV to about 150 eV.

48. (Previously presented) The method of claim 1, wherein the supplying energized particles includes supplying ions having an energy in the range of about 10 eV to about 100 eV.

49. (Previously presented) The method of claim 38, wherein the supplying energized particles includes supplying ions having an energy in the range of about 10 eV to about 50 eV.

50. (Previously presented) The method of claim 38, wherein the supplying energized particles includes supplying ions having an energy in the range of about 10 eV to about 40 eV.

51. (Previously presented) The method of claim 38, wherein the supplying energized particles includes supplying ions having an energy in the range of about 10 eV to about 30 eV.

52. (Previously presented) The method of claim 38, wherein the supplying energized particles includes supplying ions having an energy in the range of about 10 eV to about 20 eV.

53. (Previously presented) The method of claim 1, wherein the supplying energized particles includes supplying ions having an energy in the range of about 20eV to about 300 eV.

54. (Previously presented) The method of claim 1, wherein the supplying energized particles includes supplying ions having an energy in the range of about 20eV to about 250 eV.

55. (Previously presented) The method of claim 1, wherein the supplying energized particles includes supplying ions having an energy in the range of about 20eV to about 200 eV.

56. (Previously presented) The method of claim 1, wherein the supplying energized particles includes supplying ions having an energy in the range of about 20eV to about 150 eV.

57. (Previously presented) The method of claim 1, wherein the supplying energized particles includes supplying ions having an energy in the range of about 20eV to about 100 eV.

58. (Previously presented) The method of claim 38, wherein the supplying energized particles includes supplying ions having an energy in the range of about 20eV to about 50 eV.

59. (Previously presented) The method of claim 38, wherein the supplying energized particles includes supplying ions having an energy in the range of about 20eV to about 40 eV.

60. (Previously presented) The method of claim 38, wherein the supplying energized particles includes supplying ions having an energy in the range of about 20eV to about 30 eV.

61. (Previously presented) The method of claim 38, wherein the supplying energized particles includes supplying ions having an energy in the range of about 20 eV.

62. (Cancelled)

63. (Previously presented) The method of claim 1, wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness of less than 4000 Angstroms.

64. (Previously presented) The method of claim 1, wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness of less than 3000 Angstroms.

65. (Previously presented) The method of claim 1, wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness of less than 2000 Angstroms.

66. (Previously presented) The method of claim 1, wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness of less than 1000 Angstroms.

67. (Previously presented) The method of claim 1, wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness of less than 500 Angstroms.

68. (Previously presented) The method of claim 1, wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness of less than about 400 Angstroms.

69. (Previously presented) The method of claim 1, wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness of less than about 300 Angstroms.

70. (Previously presented) The method of claim 1, wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness of less than about 250 Angstroms.

71. (Previously presented) A method of fabricating a thin-film battery, comprising:

providing a substrate;

forming an electrode first film on the substrate;

forming an electrolyte second film electrolyte on the first film, wherein the electrolyte second film blocks the flow of electrons while permitting the flow of ions, and wherein forming the electrolyte second film includes:

depositing electrolyte material using a deposition source; and

supplying energized particles from a second source such that the particles provide energy to the electrolyte material to deposit the electrolyte material into a desired film structure; and

forming an electrode third film on the second film,

wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness of less than about 200 Angstroms.

72. (Previously presented) The method of claim 71, wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness of less than about 150 Angstroms.

73. (Previously presented) The method of claim 71, wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness in a range of about 10 Angstroms and about 50 Angstroms.

74. (Previously presented) The method of claim 71, wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness of less than about 75 Angstroms.

75. (Previously presented) The method of claim 71, wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness of less than about 50 Angstroms.

76. (Previously presented) The method of claim 71, wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness of less than about 30 Angstroms.

77. (Previously presented) The method of claim 71, wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness of less than about 20 Angstroms.

78. (Previously presented) The method of claim 71, wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness of about 20 Angstroms.

79. (Previously presented) The method of claim 71, wherein the, forming the electrolyte second film includes forming the electrolyte film to a thickness of about 10 Angstroms.

80. (Currently amended) A method of fabricating a thin-film battery, comprising:

providing a substrate;

forming an electrode first film on the substrate;

forming an electrolyte second film electrolyte on the first film, wherein the electrolyte second film blocks the flow of electrons while permitting the flow of ions, and wherein forming the electrolyte second film includes:

depositing electrolyte material using a deposition source; and

supplying energized particles from a second source such that the particles provide energy to the electrolyte material to deposit the electrolyte material into a desired film structure; and

forming an electrode third film on the second film,

wherein the forming of the first film includes depositing a vanadium oxide, the forming of the second film includes depositing lithium phosphorus oxynitride, and the forming of the third film includes depositing a lithium intercalation material<u>, and</u>

wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness of less than 2000 Angstroms.

81. (Previously presented) The method of claim 1, wherein the forming of the electrode first film includes depositing an intercalation material.

82. (Previously presented) The method of claim 81, wherein the forming of the electrode third film includes depositing a metal.

83. (Previously presented) The method of claim 1, wherein the forming of the electrode first film includes depositing a metal.

84. (Previously presented) The method of claim 83, wherein the forming of the electrode third film includes depositing an intercalation material.

85. (Previously presented) The method of claim 71, wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness in a range of about 20 Angstroms and about 150 Angstroms.

86. (Previously presented) The method of claim 71, wherein the forming the electrolyte second film includes forming the electrolyte film to a thickness in a range of about 20 Angstroms and about 200 Angstroms.

87. (Previously presented) The apparatus of claim 37, wherein the electrolyte second film is lithium phosphorus oxynitride.

88 - 90. (Cancelled)

91. (Previously presented) The method of claim 1, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

92. (Previously presented) The method of claim 2, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

93. (Previously presented) The method of claim 3, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

94. (Previously presented) The method of claim 4, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

95. (Previously presented) The method of claim 5, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

96. (Previously presented) The method of claim 14, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

97. (Previously presented) The method of claim 39, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

98. (Previously presented) The method of claim 7, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

99. (Previously presented) The method of claim 9, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

100. (Previously presented) The method of claim 66, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the Li_3PO_4 electrolyte material to form lithium phosphorus oxynitride.

101. (Previously presented) The method of claim 67, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

102. (Previously presented) The method of claim 70, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

103. (Previously presented) The method of claim 13, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

104. (Previously presented) The method of claim 14, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

105. (Previously presented) The method of claim 15, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

106. (Previously presented) The method of claim 16, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

107. (Previously presented) The method of claim 17, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

108. (Previously presented) The method of claim 18, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

109. (Previously presented) The method of claim 19, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

110. (Previously presented) The method of claim 20, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

111. (Previously presented) The method of claim 21, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

112. (Previously presented) The method of claim 22, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

113. (Currently amended) A method comprising:

providing a substrate;

depositing an electrode first film on the substrate;

depositing an electrolyte second film on the first film, wherein the electrolyte second film blocks the flow of electrons while permitting the flow of ions, and wherein the electrolyte second film includes LiPON electrolyte material deposited using an electrolyte deposition source and energized nitrogen particles from a second source such that the energized nitrogen particles provide energy to the electrolyte material during its deposition to form the electrolyte material into a desired film structure; and

depositing an electrode third film on the second film,

<u>wherein the electrolyte second film is deposited to a thickness in a range of about 10 Angstroms and about 200 Angstroms.</u>

114. (Cancelled)

115. (Previously presented) The method of claim 113, wherein the electrolyte second film is deposited to a thickness in a range of about 10 Angstroms and about 100 Angstroms.

116. (Previously presented) The method of claim 113, wherein the electrolyte second film is deposited to a thickness in a range of about 10 Angstroms and about 50 Angstroms.

117. (Previously presented) The method of claim 38, wherein depositing electrolyte material includes depositing Li_3PO_4 electrolyte material.

118. (Previously presented) The method of claim 46, wherein depositing electrolyte material includes depositing Li_3PO_4 electrolyte material.

119. (Previously presented) The method of claim 71, wherein depositing electrolyte material includes depositing Li_3PO_4 electrolyte material.

120. (Cancelled)

121. (Previously presented) The method of claim 73, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

122. (Previously presented) The method of claim 86, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

123. (Previously presented) The method of claim 49, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

124. (Previously presented) The method of claim 58, wherein the supplying of energized particles includes supplying energized nitrogen particles, and reacting the nitrogen particles with the electrolyte material to form lithium phosphorus oxynitride.

125. (Currently amended) An apparatus comprising:

means for providing a substrate;

means for depositing an electrode first film on the substrate;

means for depositing an electrolyte second film on the first film, wherein the electrolyte second film blocks the flow of electrons while permitting the flow of ions, and wherein the electrolyte second film includes LiPON electrolyte material deposited using an electrolyte deposition source and energized nitrogen particles from a second source such that the energized nitrogen particles provide energy to the electrolyte material during its deposition to form the electrolyte material into a desired film structure; and

means for depositing an electrode third film to form a battery that includes the electrolyte second film and the electrode first film,

wherein the electrolyte second film is deposited to a thickness of less than about 5000 Angstroms.

126. (Cancelled)

127. (Previously presented) The apparatus of claim 125, wherein the electrolyte second film is deposited to a thickness in a range of about 10 Angstroms and about 200 Angstroms.

128. (Previously presented) The apparatus of claim 125, wherein the electrolyte second film is deposited to a thickness in a range of about 10 Angstroms and about 50 Angstroms.

129. (Cancelled)

130. (Previously presented) The apparatus of claim 37, wherein the electrolyte second film is deposited to a thickness in a range of about 10 Angstroms and about 200 Angstroms.

131. (Previously presented) The apparatus of claim 37, wherein the electrolyte second film is deposited to a thickness in a range of about 10 Angstroms and about 50 Angstroms.

132. (Previously presented) The apparatus of claim 37, wherein the means for supplying of energized particles supplies energized nitrogen particles, and the nitrogen particles react with the electrolyte material to form lithium phosphorus oxynitride.

133. (New) The method of claim 1, wherein the forming of the second film includes depositing lithium phosphorus oxynitride.

134. (New) The method of claim 38, wherein the forming of the second film includes depositing lithium phosphorus oxynitride.

135. (New) The method of claim 113, wherein the forming of the second film includes depositing lithium phosphorus oxynitride.

136. (New) The apparatus of claim 125, wherein the electrolyte second film is lithium phosphorus oxynitride.